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Maj-Gen Arsentyev on New Regulations

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No 4, Apr 94 (signed to press 26 Mar 94) pp 2-8

[Article by Major General A. Arsentyev, chief of Programs and Regulations Directorate, Ground Troops Main Combat Training Directorate: "New Regulations for a New Army"]

[Text] The "Ustav vnutrenney sluzhby" [Interior Service Regulations], "Disziplinarnyy ustav" [Disciplinary Regulations] and "Ustav garnizonnoy i karaulnoy sluzhby" [Manual of Garrison and Guard Duties] of the Russian Federation Armed Forces were approved and placed into effect as of 12 July 1994 by a Russian Federation Presidential Edict of 14 December 1993. Russian Federation Minister of Defense Order No 600 of 15 December 1993 places into effect the Russian Federation Armed Forces "Stroyevoy ustav" [Drill Regulations] on this same date.

Compared with the 1975 regulations, the new Russian Armed Forces general military regulations have features recounted by Major General A. Arsentyev, chief of Programs and Regulations Directorate of the Ground Troops Main Combat Training Directorate, at the editors' request.

The new Russian Armed Forces general military regulations were developed on the basis of provisional regulations approved by the Russian Federation President in 1992 and intended for regulating the life and activity of troops in the transition period of Russian Federation Armed Forces organizational development and formation. But in connection with the fact that the provisional general military regulations were published considerably before legislative acts on defense matters, some contradictions arose between the content of the regulations and provisions of the Russian Federation laws "On the Status of Servicemen" and "On Military Obligation and Military Service." This required appropriate clarifications in preparing the permanent regulations. In addition, from an analysis of proposals—and there were some 2,000 which came from the troops in 1993—it was established that a number of provisions of the provisional general military regulations also required changes and clarifications.

The effect of the regulations extends to servicemen of Border Guard Troops, Internal Security Forces, Ministry of Internal Affairs, Railroad Troops and Civil Defense Troops and to servicemen of the system of federal counterintelligence agencies, Russian Federation Security Administration, Federal Agency for Government Communications and Information under the Russian Federation President, Paramilitary Firefighting Service of the Ministry of Internal Affairs, and servicemen of other ministries and departments.

In addition, many editorial corrections have been made to all regulations aimed at laconism for ease of reading and at unambiguity of understanding.

Russian Federation Armed Forces Interior Service Regulations

1. The regulations include the text of the military oath in the new wording approved by the Russian Federation Law "On Military Obligation and Military Service."
2. A separate section includes a provision on the status of military unit colors and the Naval Ensign.
3. Chapter 1 "Servicemen's Rights, Obligations and Responsibility" has been included in Part I "Armed Forces Servicemen and Relations Among Them."

The chapter defines military service as a special kind of state service; it enumerates all persons categorized as servicemen.

4. The chapter points out that the content and extent of rights, obligations and responsibility of servicemen depend on whether or not they are performing duties of military service in accordance with Russian Federation legislation.
5. The right to use weapons is set forth especially. The regulations state that servicemen have the right to employ weapons personally or as part of a subunit as an extreme measure, when other methods and means have proved impossible:

- to repel a group attack or armed attack on protected military and state installations and also on the disposition of military units and subunits, military unit buildings and structures, military trains, vehicle columns, individual means of transportation and guards;
- to stop attempts at violent seizure of weapons and military equipment;
- to protect servicemen and civilians against an attack threatening their life or health;
- to detain a person who has committed a crime or has been caught in the commission of a grave and dangerous crime and offers armed resistance, and to detain an armed person who refuses to carry out lawful demands to surrender a weapon.

In addition, a commander (officer in charge) has the right to employ weapons to restore discipline and order in case of a subordinate's overt insubordination, where the disobedient person's actions clearly are aimed at treason or disruption of performance of a combat mission under combat conditions.

Use of weapons must be preceded by a warning of intent to use them. Weapons may be used without warning in a surprise or armed attack; in an attack that uses combat equipment, means of transportation, aircraft, or marine or river vessels; in an escape from under guard with weapons or using means of transportation during their movement, at night or under other conditions of limited visibility.

Servicemen have the right to employ weapons to give a signal of alarm or to summon help, and also against an animal threatening people's life or health.

In employing and using weapons, a serviceman is obligated to take all possible steps to ensure the safety of surrounding citizens.

It is prohibited to employ weapons against women and juveniles, with the exception of instances where they are making an armed attack, offering armed resistance or making a group attack threatening the life of the serviceman and other citizens, if it is impossible to repel such an attack or such resistance by other methods and means.

A serviceman reports every instance of the employment or use of weapons to the commander (officer in charge).

It must be noted that all enumerated measures are aimed above all at ensuring servicemen's safety. As a rule, confusion and ignorance of the procedure for employing weapons lead to tragic consequences.

6. The section "The Serviceman's General Obligations" stipulates that a Russian Federation Armed Forces serviceman is guided in official activity by requirements of laws and military regulations and must not be connected with the activity of public and other organizations and associations pursuing political goals.
7. It is noted for the first time in the regulations that a serviceman must observe requirements for safety of military service and measures for preventing diseases, injuries and affections, improve physical conditioning and training daily, and refrain from harmful habits (smoking, use of alcohol). This provision is aimed at increasing each serviceman's personal responsibility for preserving his life and strengthening health.

At the same time, commanders (officers in charge) are not relieved of responsibility for safety of military service. It is pointed out in addition that measures taken by them to prevent death and injury of personnel should not lead to disruption of the performance of a combat mission.
8. The sections "Job-Related and Special Obligations" and "Servicemen's Liability" set forth general concepts of job-related and special obligations and about how they are determined. A description is given of all kinds of liability which servicemen may incur: disciplinary, administrative, civil law, material and criminal. As a rule, servicemen incur one kind of liability for infractions committed.
9. Chapter 2 "Relations Among Servicemen" gives a definition of one-man command. All provisions on the order are consolidated in a separate section. It is pointed out that before issuing an order a commander (officer in charge) is obligated to estimate

the situation thoroughly and provide for measures for its execution. He is responsible for the order issued and its consequences, for seeing that the order conforms to legislation, and also for abuse of authority and exceeding authority or official powers in the order being issued and for not taking steps to execute it. It is emphasized that a serviceman cannot be issued orders and instructions or assigned missions having nothing to do with military service or aimed at violating the law. The section also reflects the interrelationship of unquestioning execution of an order and a serviceman's reasonable initiative. This is especially necessary when the order received may not conform to a situation which has changed sharply and conditions are such that it is impossible to receive a new order in time.

10. A number of terms and expressions in Chapter 2 also have been changed. For example, the term "saluting [otdaniye voinskoy chesti; literally, rendering military honor]" has been replaced by "saluting [voinskoye privetstviye; literally, military greeting]", and the expression "I Serve the Soviet Union" by "I Serve the Homeland." The procedure for meeting honored visitors when they visit a military unit as well as the procedure for wearing the military uniform has been set forth for the first time. In particular it is pointed out that servicemen are permitted not to wear the uniform outside the military unit area during time off, on pass or on leave.
11. Considering the large number of proposals which came from servicemen requesting exclusion from the regulations of the provision according to which the command "Attention" is given every time the commander visits a military unit or subunit, it has been established that the command "Attention" is given only with the commander's first visit to the unit or subunit.
12. The following provision has been included in the section "On Military Courtesy and Conduct of Servicemen": "During off-duty time and out of formation it is possible to address each other not only by military rank, but also by first name and patronymic. In day-to-day life it is permitted to use the affirmative expression "officer's word," and when parting with each other it is permissible to say "I have the honor" instead of "Good-bye."
13. The provision of the "Provisional Interior Service Regulations" according to which deputy regimental (battalion, company) commanders for weapons and for the rear are immediate supervisors of all personnel except of persons immediately subordinate to the regimental (battalion, company) commander, for whom their instructions on technical (logistic) support are mandatory, did not find support in the troops. Therefore it is fixed in the regulations that these officials are the immediate superiors of all regimental (battalion, company) personnel.
14. Deputy regimental (battalion, company) commanders for educational work (as the former deputy

commanders for work with personnel now are called) are charged, along with chiefs of staff, with keeping an account of crimes, incidents and disciplinary infractions.

15. The deputy regimental commander for rear is directed to take responsibility for fire protection in the regiment and for ecology. The chief of the fire protection and rescue operations service again is subordinated to him.
16. Duties of the chief of the weather service and deputy regimental commander for rear have been included in the regulations.
17. Battalion chiefs of staff are given the responsibility for keeping an account of the duty time of servicemen performing contract military service, the time they are involved in performing military service obligations above the established length of weekly duty time, and also the granting of additional days off (time off) to them.
18. A number of provisions concerning conditions of the personnel's life and routine have been included in Chapter 4 "Accommodation of Servicemen." It is envisaged having a lounge, a room or place for sports activities, shower, and lavatory in the unit area. Provisions have been introduced on accommodation of servicemen performing contract military service, including servicewomen as well as cadets of military educational institutions.
19. The section "Environmental Protection" has been included in this same chapter. This is occasioned by the importance of this problem and by servicemen's insufficient knowledge and experience in ensuring environmental protection.
20. The regulation of duty time of servicemen performing contract military service has been introduced as a supplement to the daily routine; it establishes time periods and length of time of their performance of basic activities stemming from duties of military service.
21. At the same time it has been incorporated that an around-the-clock tour of duty in a military unit and subunits by officers and warrant officers who are not part of the daily detail and also the assignment of responsible parties can be instituted only by the military district commander in exceptional cases and for a limited time.
22. The procedure for liberty for servicemen with an increased term of military service has been updated: seamen and petty officer of Navy ships, vessels and units have the right to daily liberty from ships and from military units in a period between performance of operational training missions.
23. The regulations emphasize that combat training is the main content of servicemen's day-to-day activity in peacetime. Classes and exercises for the purpose of having servicemen master procedures in modern battle must be conducted without indulgence and oversimplifications. Commanders (officers in charge) guilty of separating personnel from combat training classes are held liable. Measures specified by the combat training plan and class schedule may be postponed only by the regimental commander.
24. In Chapter 6 "The Daily Detail" the purpose of the daily detail is updated. It has been supplemented by such tasks as providing security for personnel, monitoring the state of affairs in the subunit and taking timely steps to prevent law violations. The procedure for servicemen's assignment to the detail has been made more precise with consideration of an increase in their social protection. A section "Preparation of the Daily Detail" has been included and it also has been established that servicemen serving under contract are given a day off during the week after performing duty on days off and holidays.
25. Two new sections have been included in Chapter 8 "Preserving and Strengthening Servicemen's Health": "Improving Conditions of Service and Everyday Life of Servicemen" and "Servicemen's Conditioning and Engaging in Physical Training and Sports." They reveal the role of servicemen's health, how it is preserved and strengthened, and the role and responsibility in this both of commanders as well as of all servicemen.
26. To improve the quality and results of prescribed treatment and prophylactic measures, the regulations specify that a conclusion about partial or full release from classes and work is made by the physician, and where the table of organization does not provide for a physician, then by the paramedic. Recommendations of the physician (paramedic) about release from performance of duties must be subject to mandatory fulfillment by officials. A regimental order announces the release from and return to duty after illness of servicemen performing contract military service.
27. Annexes to the regulations have been considerably revised and systemized. Some annexes to the 1975 regulations have been consolidated in one annex "Forms of Documents Kept in the Company." At the same time, new annexes have been introduced such as "Annual Military Unit Holidays," "Procedure for Distributing Arriving Replacements to Subunits," "Procedure for Presenting Weapons and Military Equipment to Personnel," "Procedure for Sending Off Servicemen Discharged to the Reserve or to Retirement," "Preparation of Rooms (Places) for Duty by the Daily Detail," "List of Necessary Documents" and "List of Questions on Organization of Combat Training and of Interior and Guard Duties Set Forth in the Regimental Commander's Order for the Training Period."

Russian Federation Armed Forces Disciplinary Regulations

Provisions specifying what military discipline obligates each serviceman to do and how military discipline is achieved are updated with consideration of modern requirements in Chapter 1 "General Provisions."

1. It is pointed out that the commander and his deputy for educational work are responsible for the status of military discipline in the military unit (subunit).
2. Duties of commanders (officers in charge) for maintaining high military discipline are elaborated.
3. It is specified that the work of the commander (officer in charge) to maintain military discipline is evaluated not according to the number of disciplinary punishments imposed, but according to his precise fulfillment of Russian Federation laws and military regulations, full use of his disciplinary authority and performance of official duties for purposes of imposing order and promptly preventing violations of military discipline.
4. The regulations point out that not one violator should escape liability, but also that not one innocent person should be punished. It is emphasized that each serviceman must be confident of the protection of his rights and lawful interests and should feel the concern of the commander (officer in charge) for the inviolability of his person and respect for his honor and dignity.
5. It is specified that a commander (officer in charge) bears no liability for crimes, incidents and infractions of subordinates if they are not a direct result of his activity or of his not taking steps to prevent them.
6. Chapter 2 "Incentives" envisages the application of new kinds of incentives:
 - a. For privates, seamen, sergeants and petty officers—"an increase in length of mandatory leave for a period up to five days." Taking into account wishes which came from the troops and also the fact that each serviceman performing conscript military service has the right to one pass a week, the incentive of a pass from the military unit area (or from the ship ashore) out of turn has been excluded from the regulations;
 - b. For warrant officers—early promotion;
 - c. For officers—entry on the military unit (ship) honor roll, promotion to the next military rank up to and including major (captain 3rd rank) by one level higher than the military rank envisaged for the authorized position occupied.

A system of incentives is specified for privates, seamen, sergeants and petty officers who have entered military service under contract.

The rights of commanders (officers in charge), and above all subunit commanders, to apply incentives have been expanded. A company commander has the right to inform the home area or place of previous work or study of privates and sergeants about their exemplary performance of military duty and to increase the length of a first-term serviceman's compulsory leave for up to two days. A battalion commander correspondingly can do so for a period of up to three days and can award a certificate. A regimental commander and higher superiors can increase the length of compulsory leave for first-term servicemen by up to five days.

The regulations point out that "a serviceman with a disciplinary punishment is given an incentive by removal of a previously imposed disciplinary punishment" in order to increase the significance of any punishment and to impose order in using and accounting for incentives.

The procedure for removing the disciplinary punishment of a reduction in military rank (position) has been updated. The disciplinary punishment of a reduction in military rank (position) can be removed with respect to servicemen on conscript service no earlier than three months from the day of reduction; the disciplinary punishment of a reduction in position is removed from servicemen performing contract military service as follows:

- from privates, sergeants, seamen and petty officers—no earlier than after six months;
- from warrant officers and officers—no earlier than one year from the day of reduction in position.

Provisions of Chapter 3 "Disciplinary Punishments" also have been updated. Broad involvement of the public, including also of the Officer Assembly, is envisaged for examining and discussing an infraction of violators of military discipline in order to maintain legality and increase servicemen's legal knowledge and consciousness in performance of their military duty.

The punishment of "admonition" has been excluded from the regulations for all categories of servicemen as not having practical application. Privates and seamen may be assigned to a detail out of turn not for service, but for work. The right to apply this punishment is granted to all commanders (from squad commander on up).

Based on numerous requests of officers, especially at the regimental level, the regimental commander is granted the right, as a disciplinary punishment, to discharge privates, seamen, sergeants and petty officers performing contract military service to the reserve ahead of schedule before expiration of their term of service.

The Disciplinary Regulations consider confinement [arrest] as one of the extreme measures of disciplinary influence. Considering this, a list of gross disciplinary infractions for the commission of which a serviceman may be subject to confinement has been included in the regulations:

- absence without leave;
- late in returning from leave, TDY and medical facilities;
- being late or unauthorized departure from duty;
- violation of rules of guard (watch) and routine garrison duties and alert duty;
- performance of official duties in a state of alcoholic, narcotic or toxic inebriation;
- violation of safety requirements which led to loss of working capacity;
- violation of regulation rules of mutual relations among servicemen;
- squandering or losing military property;
- off-duty infractions in public places.

Confinement in the guardroom is not envisaged to be applied to officers, since it will not conform to the prestige of officer service, to an increase in their honor and dignity, and to the job to which officers have devoted their entire lives. The maximum time served in confinement has been reduced from 10 to 5 days for warrant officers and from 10 to 7 days for sergeants and petty officers performing contract military service.

A new form of punishment—early discharge to the reserve—has been introduced for officers in the position of deputy regimental commander, executive officer of first rank ships, their equivalent and below.

It has been established that the punishment "warning of incomplete official conformity" is applied once during the time a serviceman is in the occupied position, and he is recommended for a reduction in position if he has not corrected his behavior within a year after imposition of this punishment.

To increase the significance and severity of the disciplinary punishment of guardroom confinement imposed on a first-term serviceman, it has been specified that if this punishment is not removed from a first-term serviceman in the course of a year after imposition, then he is granted the main leave of no more than half of the prescribed time period.

The section "Procedure for Imposition of Disciplinary Punishments" has taken into account the need for a legal basis of the procedure for imposing

disciplinary punishments which precludes arbitrariness but ensures inevitability and fairness in punishing the true violators of military discipline. In particular it is specified that proceedings must precede the decision by a commander (officer in charge) to impose disciplinary punishment on a subordinate. They are held to establish the guilty parties and reveal causes and conditions contributing to commission of the infraction. In holding proceedings the commander (officer in charge) must take into account that imposition of disciplinary punishment on a serviceman who has committed an infraction as a rule is done on the next day, but no later than 10 days from the day the infraction became known. Introduction of that addition will permit the commander (officer in charge) to avoid hasty, precipitate decisionmaking in determining disciplinary punishment.

Chapter 5 "On Suggestions, Petitions and Complaints" establishes that servicemen who have discovered theft or damage of military property, illegal expenditure of funds or other facts of harm to the Armed Forces are obligated to report this to their immediate superior, and they also may send written suggestions and petitions to the senior commander up to and including the minister of defense, to agencies of military justice and to other state authorities. A serviceman also has the right to file a complaint with the court about illegitimate actions of state management agencies, public associations and officials. The rights of a serviceman who has filed a complaint also are set forth here.

The provision prohibiting servicemen from submitting group complaints has been eliminated.

Russian Federation Armed Forces Manual of Garrison and Guard Duties

In Part One "Organization and Performance of Garrison Duty," the duties of garrison officials have been refined and supplemented. Thus, the following duties are assigned additionally to the garrison commander: show constant concern for improving everyday conditions of servicemen and their families; direct the work of the garrison housing commission; exercise supervision over fulfilling measures for environmental protection and rational use of natural resources.

Duties of other garrison officials have been concretized and supplemented.

The Manual sets forth duties of the deputy (assistant) garrison commander for educational work and of a new garrison official, the assistant garrison commander for legal work.

A provision has been incorporated that classes lasting up to three hours are to be held in the military commandant's office in the daytime for drill training and for studying regulations with servicemen detained for violating rules of wearing the uniform and for not saluting.

These classes are not for the purpose of punishment and are held to improve drill precision and deepen the knowledge of regulations. The garrison military commandant is assigned to organize them.

The chapter "Garrison Military Motor Vehicle Inspection" has been developed in connection with an increased amount of motor transport and an increased volume of motor transport movements in the troops, and with the need for precise organization of work to prevent accidents of military unit transport vehicles. It reveals the purpose and makeup of the Military Motor Vehicle Inspection and specifies duties of officials and principles of organization.

Part Two "Organization and Performance of Guard Duty" refines and supplements questions of organizing and performing guard duty along the following directions:

- duties of the commander of the guard have been elaborated and the procedure for relieving the guard in case an alert is declared is specified. In addition, it is pointed out that a guard headed by an officer may perform duty without relief for up to seven days for the period that a military unit is in an exercise;
- features of organizing the security of aircraft, helicopters and other installations at airfields are reflected;
- features of security and defense of headquarters and command posts of the large strategic formation on up, as well as of military establishments, are revealed;
- a new section "Guard Duty Using Technical Security Equipment" has been included which legitimizes use of technical security equipment in guard details, creates conditions for increasing the reliability of security of military and state installations, and permits reducing the number of guard personnel.

Sentry duties have been supplemented by the requirement for using communications equipment to report the progress of performance of duty at times established by the list of posts of the guard.

Special duties of the commander of the guard are set forth for security of installations equipped with technical security equipment.

Considerable attention is given to training the guard: the procedure for conducting classes (in three stages) and officials' duties are clarified.

The Manual is supplemented by a provision under which Russian Armed Forces military units are used for mopping up in the aftermath of extraordinary circumstances (natural disasters, major accidents or catastrophes). These units operate in accordance with the provision of this Manual and with Russian Federation legislation.

Annexes to the Manual also have been supplemented: the procedure for fencing off installations and preparing posts, the guardroom and the garrison military commandant's office has been updated and concretized; the number of items included in the guard uniform has been increased (insulated field jacket, armored vest, steel helmet, waterproof footwear); and some provisions about confining servicemen in the guardroom have been changed.

Russian Federation Armed Forces Drill Regulations

This document did not undergo significant changes. Individual provisions in it whose content were affected by changes in the Interior Service Regulations, Disciplinary Regulations and Manual of Garrison and Guard Duties have been updated.

Six articles whose provisions are obsolete and not applied in troop practice have been eliminated from the regulations. Ten new articles have been included, along with three provisors: "Regimental Formation for Official Presentation of the Unit Colors," "Regimental Formation for Inquiring About Complaints and Petitions in Inspection" and "Preparing the Drill Field."

The number of drill movements and actions with and without weapons has been reduced in the regulations and only those used in combat training classes, when performing duty in the daily detail, and in everyday life are specified.

Changes have been made to subunit formations with consideration of the new troop table of organization structure; to the procedure for personnel formation and actions at and in vehicles in connection with design features of new equipment; and to the content of individual commands for execution of individual movements. Subunit formations not used in troop practice have been abolished. Suggestions aimed at subordinating drill training to tactics have been taken into account. The movement "To the rear, march" for turning while in movement has been included.

In conclusion it must be noted that a knowledge of provisions of regulations and thorough comprehension of regulation requirements permits commanders (officers in charge) to train and educate subordinates successfully and promptly uncover and eliminate negative phenomena hampering increased unit and subunit combat readiness.

Fulfilling the requirements of regulations means achieving that efficiency in the unit (subunit) which guarantees a healthy moral atmosphere in the collective. Where regulations are followed, order is triumphant, fairness and purity of relations are valued, and the strict appropriateness of the entire tenor of military service comes to be known to the full extent.

Moscow ADD Chief of Staff Interviewed

944D0080B Moscow VOYENNY VESTNIK in Russian No 4, Apr 94 (signed to press 26 Mar 94) pp 24-25

[Interview with Lieutenant General P. A. Kuznetsov, chief of staff/deputy commander, Moscow Air Defense District, on eve of Air Defense Troops Day, date and place not specified, by VOYENNY VESTNIK correspondent Lieutenant Colonel A. Lushnikov: "A Strong Alloy"]

[Text] Air Defense Troops Day is on 8 April and the Moscow Air Defense District celebrates its 40th anniversary in August of this year. On the eve of the holidays

Lieutenant General P. A. Kuznetsov, chief of staff and deputy commander of the Moscow Air Defense District, answers our correspondent's questions.

[VOYENNNY VESTNIK] Comrade Lieutenant General! The traditional question is: What is the district taking to the holidays?

[Kuznetsov] We probably should speak here about results of the 1993 training year, which are as follows. When results were summed up, the district was recognized in the best light in questions of organization and performance of alert duty, combat training and tactical field fire exercises. District aviation fulfilled the plan for logging flight hours despite a very difficult fuel supply situation. This is the result of selfless work by officers who took on not only organization and performance of alert duty and maintenance of equipment combat readiness, but also economic concerns and questions of supporting the personnel's everyday life and activity. It was necessary to unload coal from railcars, stand duty in the boiler room... Such are the complexities of our time, and they remain in the current year. I would put the problem of troop manpower acquisition in first place. The fall call-up plan for first-term privates and NCO's was fulfilled only by 58.9 percent.

[VOYENNNY VESTNIK] Consequently, the main load again will fall on officers?

[Kuznetsov] Yes, again it will fall on officers. True, they promise to bring the district up to strength by March, i.e., the call-up will be extended for another five months.

[VOYENNNY VESTNIK] It turns out to be difficult to organize the training cycle?

[Kuznetsov] Unfortunately. But we are getting out of the situation by organizing training during performance of alert duty. The second problem is financing. Now we require R40 billion to settle debts for fuel, food, electrical power and coal.

[VOYENNNY VESTNIK] But that is a very large amount!

[Kuznetsov] This is a precise figure. Money is allocated very slowly, and we spend it basically for servicemen's pay and for keeping units at a survival level. Last month a number of units on alert duty were disconnected from the Mosenergo [Moscow Area Power Industry Administration] network.

[VOYENNNY VESTNIK] This can be regarded as an unfriendly act on Mosenergo's part, to put it mildly?..

[Kuznetsov] Such are the realities of our service under reform conditions. Even money which has come in takes a long time getting through the bank. This spoils relations with suppliers.

[VOYENNNY VESTNIK] In this connection I would like to ask a question troubling everyone connected with

the defense complex: How does disintegration of the defense industry affect district units?

[Kuznetsov] We felt the defense industry's disintegration less than others. The district has been supplied with new equipment, although of course with a lag behind the plan. Two fighter regiments have been up-armed with MIG-31 and SU-27 aircraft over the last two years. Both regiments went on alert duty. The surface-to-air missile defense system of Moscow and of the central industrial area has been placed on alert duty. A number of first echelon SAM regiments have been up-armed with S-300 systems. New Radiotechnical Troops equipment was delayed, but it came.

[VOYENNNY VESTNIK] And how are things with the repair base?

[Kuznetsov] Considerably worse. It is very difficult with deliveries of spare parts, tools and accessories. Further, some repair entities ended up abroad: in Belarus, Ukraine, the Caucasus. Now a perestroyka of the technical support system, including also in district units, is underway. It is a difficult period. Equipment fails, and for now there is nothing with which to restore it.

[VOYENNNY VESTNIK] The picture turns out to be rather dismal, but there are achievements with which you previously headed for jubilees. What we can gladden readers with now?

[Kuznetsov] There is something, of course, for it is the 40th anniversary. In 40 years, together with the Air Defense Troops as a branch of the Armed Forces, the district also built up might. Let us take equipment in the year Moscow ADD was formed. The Radiotechnical Troops had P-3, P-8, P-20 and P-50 radars with a maximum acquisition range of 150-190 km and altitude of 10,000-12,000 m.

At the present time the Radiotechnical Troops have 5N87 long-range radar acquisition systems in the inventory with a range up to 370 km and an altitude up to 35,000 m and 19Zh6 low-altitude 3-D systems, which reliably acquire low-flying targets with small scattering cross-sections at a range up to 50 km.

In 1954 fighter aviation was armed with LA-15, MIG-15 and MIG-17 jet fighters. Their maximum speed was subsonic. Acquisition capabilities were visual. The armament was cannon, 23-mm and 37-mm guns with a range of fire of 1.2-1.4 km. Presently there are MIG-31 and SU-27 fighters with a maximum speed exceeding that of sound by 2.4-2.8 times. A radar sight permits acquiring targets at a range of 180 km. The armament is 8-10 missiles with a range of fire of 80-100 km and the capability of simultaneous guidance on four targets.

Multichannel S-300 SAM systems have become operational with the SAM Troops. Each system is capable of simultaneously guiding 12 missiles against six targets flying at altitudes from 25 m to 30 km. And during the

district's formation there were S-60 and S-100 AAA systems. Later S-25 SAM systems appeared...

[VOYENNNY VESTNIK] Was it not this system that L. N. Mashyanov, now an Armed Forces veteran, was one of the first to master?

[Kuznetsov] Yes, this one... It is impossible not to mention many other people as well. Such military leaders as Marshal of the Soviet Union P. F. Batitskiy, Chief Marshal of Aviation A. I. Koldunov, and the present Commander in Chief of National Air Defense Colonel General V. A. Prudnikov served in district troops. Behind all the modern equipment stand people who have mastered it and skillfully employ it. The results speak for themselves: two duty S-300 SAM battalions and one MIG-31 squadron were moved to the range in the course of an end-of-training-period performance evaluation conducted under the direction of Deputy Minister of Defense Colonel General Kondratyev. All targets were destroyed. The mission was performed excellently. District SAM Troops and fighter aviation destroyed 59 of 62 targets during the year. This is high effectiveness.

As before, success is determined by the alloy of people and equipment. Today it is strong and reliable.

Armed Conflict and Russian Security (Cont)

944D0080C Moscow VOYENNNY VESTNIK in Russian
No 4, Apr 94 (signed to press 26 Mar 94) pp 28-33

[Part Two of article by Colonel V. Cheban, doctor of philosophical sciences; Part One in VOYENNNY VESTNIK No 2, 1994]

[Text] Security of the state is a many-sided phenomenon which includes military, economic, political, spiritual-moral and other aspects. Each of its facets is dictated by the corresponding kind of danger which a particular event, process or phenomenon harbors for society's vital functions.

Economic crises and the destruction of the production and consumption structure have a negative effect on a country's economic security. Social shocks subject the state system to serious danger. An erosion of society's intellectual potential and spiritual capital increases the danger of people's spiritual-moral decay and moral degradation. A neglect of citizens' social protection contributes to a worsening of how people feel and leads to a degeneration of the nation's gene pool. Ignoring environmental protection problems and "miscalculating" ecologic consequences of production activity reinforce ecologic danger. Earthquakes, fires, epidemics, floods and other natural disasters as well as the Chernobyl type of "hand-made" accidents and disasters can endanger many states...

But there are events which exert a comprehensive negative effect, if not on all, then at any rate on many spheres of society's vital functions. They include armed conflicts

along with large-scale wars. It stands to reason that there are significant differences in their effect on a state's security.

The danger of war is strongly pronounced for society inasmuch as the dependence of a state's fate on the course and outcome of an armed clash stands out in relief for all to see. It sharply deforms the entire way of life and subordinates the country's economy, politics and spiritual sphere to wartime laws.

Armed conflicts have a somewhat different influence on a state's security. Above all a strongly pronounced immediate danger is not felt initially, although under conditions of an interconnected and interconditional world, countries and people any conflict is genetically predisposed to transformation into major wars. The history of mankind has many examples on this score. Nevertheless, the spatial limitation and remoteness of conflicts and the relatively small number of participants and arms create a certain illusion of security for contiguous states.

In addition, armed conflicts which have stretched out in time dull a sense of watchfulness—people become accustomed to them. The evolution of the dosage of mass media reports on them eloquently attests to this. Thus, sociologists have noted that the sensational filing of articles on conflicts between Armenia and Azerbaijan, Georgia and Abkhazia, and Moldova and the Dniester Republic at the beginning of their development soon was replaced by workaday radio and television broadcasts. Other materials gradually began moving onto the front pages of newspapers and journals, although the amount of victims, destruction and atrocities clearly was not dropping. This habit naturally leads to a situation where concealed mechanisms of the transition of a local conflict into a major war depart from the field of view of public opinion and of structures responsible for state security. By plunging ever newer forces, sides and spheres of life of society into the orbit of struggle, armed conflicts gradually expand the conflict-forming basis and, figuratively speaking, "dry out the brushwood for the fire of a future war."

The difficulty in defining the nature of the effect of armed conflicts lies in the fact that they do not happen in a "pure" form. They are complex, mobile and multidimensional. The limits of the beginning and end of a conflict are distinguished by a certain measure of conditionality. (Basically the reference point is taken from the first shot, first attack and so on, although hostile actions without use of weapons such as sabotage on transportation, disconnection of energy carriers, and sealing off of built-up areas and important administrative installations may be practiced long before the first shots.)

The scenario for development of armed conflicts also is multivariant. In one case they are capable of developing from minor armed skirmishes into a major clash with the employment of powerful army formations (Armenia, Azerbaijan, Georgia, Abkhazia).

In another case, a brief armed conflict may scatter into a multitude of minor ones, which in turn lead to the appearance of new centers of armed confrontation.

In a third variant it is possible to perceive the conclusion of one conflict as the beginning of the next one, which reveals layers of past "mothballed" contradictions. Armed conflicts in the North Caucasus and Central Asia are indicative in this respect.

The general description of the effect of armed conflicts on state security mentioned earlier also extends fully to Russia's security. At the same time, modern realities require additional explanation.

First. After the USSR disintegrated, Russia became vulnerable along all militarily. There are considerable sectors of the state border along almost the entire geopolitical perimeter, with the exception of the North and Far East, which not only are unreliably protected, but are not even marked! This considerably facilitates penetration by smugglers, arms suppliers (which has become especially noticeable lately) and armed units onto Russian territory.

The ambiguity of the situation of Russian border *zastavas* (outposts) on the territory of sovereign states hardly facilitates a solution to the problem. The tragedy of the 12th Border *Zastava* on soil of Tajikistan in July 1993 is significant specifically in this respect. The transparency and uncertainty of borders facilitates and stimulates penetration of the flame of armed conflicts from abroad.

Second. Not only are missions of immediate participants being accomplished in armed conflicts near our borders, but the reaction of Russia itself also is being checked. A unique reconnaissance in force and feeling out of diplomatic intentions and of Russia's military capabilities proper, as was the case, for example, in Tajikistan, are being executed.

The opposing forces are by no means beyond trying to persuade Russia to engage in warfare on their side and, if this does not succeed, then there instantly follows an accusation of "supporting the enemy" or of desiring to display "imperial ambitions." This is especially typical of the Caucasian region.

Third. Danger for Russia lies not only in the fact that opposing sides are attempting to involve it in an armed conflict or to "feel out" its position, but also in the fact that third parties are observing the development of events and actively intervening in them. For example, the United States, Germany, England, France, Iran and Turkey display an enviable degree of being informed in almost all conflicts. Representatives of these countries do not conceal that they have their own interests in regions contiguous with Russia's borders. It is also known that in the opinion of the U.S. leadership, it can defend "national interests in any region of the world" using all means, including military.

An analysis of conflicts on former USSR territory permits discovering a general pattern: as a rule, they do not arise at everyday cultural or everyday national levels, but at a political level. Ethnic differences and national uniqueness are used as a cause for directing the energy of nationalism and chauvinism toward achieving political goals.

On the other hand, it has taken shape historically that the penetration of other nations and nationalities into Russia is so great that it is impossible to deny ethnic or religious-ideological channels of their influence on our country. If national discord, nationalist ideology and aggressive religious fundamentalism are winning the minds of many people in the area of armed conflict, there is no guarantee that these same ideas will not begin to direct the social activeness of their "countrymen" living in Moscow itself or in other places. And the more ethnic conflicts there are near Russia, the more the likelihood of their negative influence on the situation in our country.

The massive flow of refugees from the area of armed conflicts also is having a substantial negative effect on social stability. The fact is, a multitude of problems of a transportation, everyday social, production and moral-psychological nature arises in connection with this. The break in the structure of production relations occurring in the country and the agonizing formation of a labor market is by no means alleviated by the influx of refugees. To the contrary, tens of thousands of people who are unfortunate, oppressed and deprived of everything that is most necessary are encountering the reality of a state in which problems of social protection are being solved with the greatest of difficulty and social tension is growing constantly as the crisis deepens and society stratifies.

Speaking of the effect of armed conflicts on the connection of law and morality, it is necessary to dwell on one extraordinarily important circumstance. If one takes a sober look at things and rejects the hypnosis of what is desired over what is real, it is possible to find a similarity in the functioning of moral-legal regulators during war and in the period of armed conflicts. Both there and here, brute armed force takes first place in regulating relations and actions. Society's customary set of moral-psychological coordinates is deformed and destroyed. While in peacetime the murder of people is punished by law and is recognized as the highest degree of immorality, during war and armed conflicts murder with respect to the enemy becomes an ordinary matter.

In addition, new social, political and military units arise in the process of armed conflicts which generally have no legal regulators—for them a legal vacuum is the chief condition of existence and fertile soil for development of "creative terrorist work."

Danger also lies in the fact that, unfortunately, Russian society also is becoming accustomed both to the murder of people as well as to the existence of armed units which

adversely affected. As the number of human deaths, physical destruction, the overall sequence of events, the structure of social awareness, especially social-psychological regime of functioning that is characteristically wartime occurs imperceptibly.

It is possible to know how the introduction of USSR troops into Afghanistan was condemned and how data on Soviet troop losses were used to end the war and establish peace and accord. As a comparison it is necessary to note that from the end of 1991 just through April 1993, 1,000 and 1,500 persons died in armed conflicts on former USSR territory. This is 10 times more than during the years of the Afghan War, but the reaction in our society and in the world is by no means adequate to the scale of the tragedy which took place on former USSR territory.

Early crimes, nature and especially their perception, attest to a trend that has appeared toward militarization of public awareness.

But armed conflicts negatively affect not only public awareness and the country but also the most important state institutions, particularly the Army. According to data of a study performed by the Russian Federation Armed Forces Center for Military-Sociological, Psychological and Legal Research in August 1993, 35 percent of officers surveyed believed in armed conflicts that are not necessary for an unspecified causes destabilizing the situation in our country and in the Army. And this is also.

First of all, with the unsettled questions of their presence on the territory of sovereign states, Russian Armed Forces personnel are becoming the target of attacks in the course of these conflicts. Thus, 54 Russian servicemen died at the hands of bandits in the Transcaucasus during 1992 and another seven persons in six months of 1993. In an overwhelming majority were on the territory of Georgia. Over the last year and a half a total of around 1,500 armed attacks have been made against Russian Army military installations and against officers and men.

Secondly, our military units attract warring sides not only as a source of weapons, military equipment and ammunition, but also as potential suppliers of professionals in military matters. Weak legal protection, social vulnerability, poor logistic support, and especially the uncertainty of the official position caused by a division of armed, unified Armed Forces and by the accelerated establishment of national armies forces some former servicemen who have ended up "overboard" to agree to take part on the side of a particular belligerent.

Thirdly, the constant use of nearby military units as peacekeeping forces, often without precisely stipulated conditions for their use, inevitably generates a knot of new contradictions. Moreover, large logistic and military resources have to be diverted to perform missions of this nature.

Such a situation took shape, for example, after a fusillade against the Russian 12th Border Zastava on the Tajik-Afghan border. Major measures of an administrative, cadre, military-technical and diplomatic nature had to be carried out at the highest state level.

Armed conflicts also have a negative effect on maintaining law and order and fighting organized crime and terrorism. The conditional nature of Russian borders with a number of sovereign states and weak customs control permit the penetration onto our territory both of large lots of weapons as well as those who love to use them for criminal purposes. The following fact can be cited as an example: 1,377,000 crimes were recorded in Russia during six months of 1993, of which more than 12,000 were committed with the use of weapons. During this period 80 Members of Internal Affairs [MVD] employees died in the performance of official duties.

Broken ties along MVD channels hamper and sometimes make impossible the detention of criminals who have left Russian territory. They often find a haven for themselves against justice in the zone of armed conflicts. In addition, people who have been "conditioned" there easily blend into organized crime structures.

An expansion of the criminogenic base combined with an economic crisis and social contradictions form that "detonating mixture" from whose explosion the state system can collapse and society's development may be slowed for decades.

Transportation and industrial accidents as well as ecologic and other kinds of disasters caused by armed conflicts can have an indirect effect on Russia's security. Thus, there remains a high likelihood of fires at major oil fields (as was the case during the Persian Gulf war), sabotage at atomic electric power stations, and explosions of hydroelectric station dams on major rivers or of powerful hydraulic works.

Neglect of epidemiological monitoring and curtailment of prophylactic work in the combat operations area also increased the danger of appearance of epidemics, mass illnesses and the spread of such diseases as cholera, plague, malaria and new influenza viruses, for which, as we know, there are no borders.

Without going into a detailed analysis of the effect of armed conflicts on Russia's economic security, the following must be noted. Curtailment of production in these areas led to a stoppage of the receipt of set-completing parts, mechanisms, assemblies and materials necessary for Russia. Serious damage has been done to joint scientific programs and the testing and experimental base. Laboratories for studying outer space, geodesy, and seismology in the Transcaucasus and Central Asia suffered especially.

The situation is complicated by the fact that each kind of danger does not act strictly along its own direction, but "draws" other kinds of danger after it as well. For

example, the appearance of signs of military danger for Russia as a result of armed conflicts near its borders is negatively affecting the economic life of border regions and the social atmosphere within society.

Summing up what has been said, it should be noted that armed conflicts represent the greatest danger for Russia strictly in the military sense, inasmuch as they create a conflict-forming base for large and small wars. This is why an objective analysis of the dangers they convey is a necessary condition for preventing them and orienting society toward counteracting the negative factors, and it contributes to creating a diversified system for blocking an unfavorable development of events.

Fundamentals of Subunit C² in Defense

944/D0080D Moscow VOYENNY VESTNIK in Russian
No 4, Apr 94 (signed to press 26 Mar 94) pp 34-41

[Continuation by A. Ye. Denisov and N. K. Shishkin of article under rubric "Combined-Arms Battle": "Combat Operations of Ground Troops Subunits"; for beginning see VOYENNY VESTNIK Nos 1-2, 1994]

[Text]

1.4. Fundamentals of Subunit Command and Control in Defense

Command and control [C²] of subunits in defense consists of the purposeful activity of commanders, their deputies and the battalion staff to maintain high combat readiness, prepare subunits for battle and direct them in performing assigned missions. The commander is the organizer of the entire C² process. The battalion commander relies on the staff, and the company commander relies on the command team, which includes the deputy for work with personnel, senior technician, first sergeant and medical party NCO in charge (in the tank company it is the deputy for weapons instead of the senior technician).

To achieve combat readiness commanders at all levels are obligated to know the subunit mission and to carry out in advance, before engagement, necessary measures in preparing for defense and strive for efficient alert duty. In addition, both in peacetime as well as wartime (in pauses between battles) it is necessary to improve the personnel's proficiency and subunit combat readiness, to keep weapons and equipment in readiness for immediate use, and to have sufficient quantities of supplies.

Preparation of the defense begins immediately after receipt of a mission, whose content differs depending on the subunit. In the battalion (company) it includes organization for battle, preparation of subunits, occupation of a defense, establishment of a battle formation and system of fire, engineer preparation of the defense area (strongpoint), practical work of commanders in subunits, and other measures. Similar matters are encompassed in the platoon and squad, but with consideration of certain features. For example, observation is organized after a

strongpoint (position) is occupied, and range cards and data for conducting fire are prepared in squads.

Organization for battle is considered a very important element. It consists of making a decision, assigning combat missions, conducting ground reconnaissance, organizing coordination and the system of fire, organizing comprehensive support of battle and C², drawing up a defense area (strongpoint) diagram and drawing up a range card (in the squad).

As a rule, squad commanders organize the defense on the terrain or, if this is impossible, from a map (diagram) or on a terrain model. But in that case an opportunity is sought to update missions and upcoming coordination on the terrain as soon as the situation permits.

On receiving a combat mission the battalion (company) commander analyzes it; determines measures which must be taken immediately for rapid preparation of subunits for defense; performs a time calculation; and orients deputies on upcoming operations. Then he estimates capabilities for engineer preparation of the defense area with consideration of terrain conditions and issues instructions to the chief of staff on preparing subunits for battle and reconnaissance and on the time and procedure of work on the terrain. (The company commander instructs commanders of organic and attached subunits on preparing for battle and on the time and procedure of work on the terrain.) After this he estimates the situation, personally makes the decision and reports it to the regimental (battalion) commander. He performs ground reconnaissance, issues a verbal operation order, organizes coordination, and gives instructions on comprehensive support of battle and on C². Subsequently the battalion (company) commander directs immediate preparation of subunits and reports to the senior commander at the prescribed time.

A platoon commander's work differs somewhat. Its specific content and sequence depend on time available and operations being carried out at a given moment. In the squad the sequence of measures for preparing for battle may differ depending on circumstances, particularly on whether or not there is contact with the enemy. But in all cases, on receiving a mission the squad (tank) commander analyzes it, moves the squad (tank) to the designated place, studies terrain, issues an operation order and organizes coordination. Then he directs engineer preparation of the position and its maskirovka [lit. "camouflage", however, includes "concealment" and "deception"—FBIS] and draws up a range card.

Under conditions of direct contact with the enemy a need may arise to capture a favorable position first and only then begin organizing the defense. The sequence of commanders' work also may differ depending on the situation and available time in reserve, but it always is aimed at continuous C² of subunits, timeliness of decisionmaking and mission assignment, and allocation of the greater part of the time for preparation for battle.

In analyzing the mission received, the battalion (company) commander above all must understand the purpose of upcoming operations; the senior commander's concept; the mission, place in battle formation and role in battle of the battalion (company); missions of adjacent subunits and procedure for coordination with them, and readiness time for performing the mission.

The platoon commander has to know the company and platoon mission, what targets on its axis are to be engaged by senior commanders' assets, missions of adjacent subunits, procedure for coordination with them and readiness time (Fig. 1).

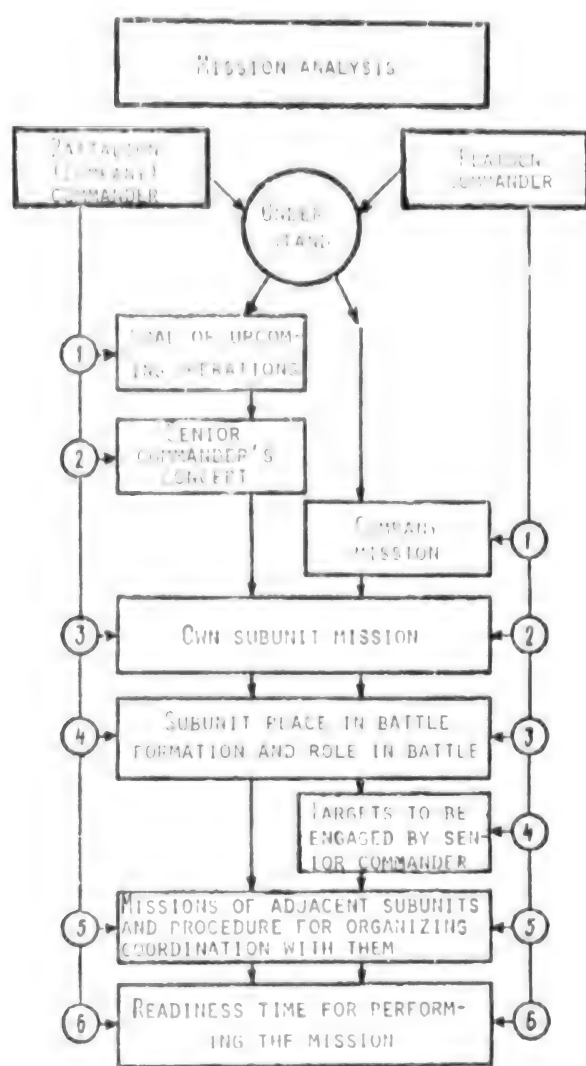


Fig. 1.

In estimating the situation the subunit commander studies the enemy, his own subunits, adjacent subunits, terrain, and the NBC situation (in the battalion and

company) and also takes account of the state of weather, time of year and day and their effect on preparation and conduct of battle (Fig. 2). As a result of this, conclusions are drawn on the most important points of the decision: calculations are made (time for performing particular measures, scope of work, forces, assets and so on), and individual elements of the decision are outlined.

The following is reflected in the conclusions:

- axis for concentration of main efforts and terrain areas on whose holding stability of the defense depends
- methods of repelling the enemy and of destroying him when he penetrates
- battle formation, systems of strongpoints (firing positions), fire, and engineer obstacles, and content and sequence of fortification
- measures of combat support and nature of coordination within the subunit and adjacent subunits
- methods of deceiving the enemy and misleading him relative to the true defense alignment
- procedure for taking advantage of favorable terrain conditions and the enemy's weak aspects

A conclusion on time periods for conducting measures for preparing the defense is arrived at based on the proposed time for beginning an attack.

In his decision the battalion (company) commander specifies the commander's concept, combat missions for subunits, basic coordination matters, and organization of C². In addition, missions also can be specified according to kinds of support. The platoon commander's decision is briefer. It includes the method for performing the assigned mission, missions for squads (tanks) and attached subunits and weapons, and organization of C².

Ground reconnaissance has an important role in organizing for battle. It is conducted at the very first opportunity and as a rule covertly. In it attention is given to seeking the most effective methods of performing the defense missions and to making maximum use of specific favorable terrain conditions (its relief, vegetation, water obstacles, built-up areas and so on).

Combat missions are assigned based on the decision. Prior to battle they are communicated in the form of a verbal operation order, most often directly on the terrain. The form of the operation order and content of its paragraphs are set forth in parts II and III of the "Boevoy ustav Sukhoputnykh voysk" [Ground Troops Field Manual]. Missions should be formulated concretely, unequivocally and clearly. Here it is impermissible to use words whose meaning may be interpreted vaguely ("closer," "further," "reliably ensure," "cover"...). It is necessary to indicate distance, means, points, local features and so on. It should be indicated precisely who is to do what, where, how and when and what forces and assets to use.

During battle, missions are communicated by operational instructions, and in addition to them warning

orders also can be issued in the battalion and company. The distinction of the latter is that missions are formulated in them with a degree of detailing which corresponds to the decision made by the senior commander as of the time the warning order was issued. As a rule, they are communicated before the reading of the operation order. Therefore the time and methods of communicating missions are indicated in the warning order.

Right after assigning the combat mission the battalion (company, platoon) commander decides questions of

coordination and the squad (tank) commander prepares his squad (tank) for performing the mission.

Coordination is organized in the battalion (company) by missions, probable axes of enemy attack and options of subunit operations. It is important to achieve precise coordination of operations of organic, attached and supporting subunits by goal, place, missions, methods and time. Special attention is given to methods of deceiving the enemy. A correct, uniform understanding of the combat mission by commanders comprises the foundation of coordinated work.

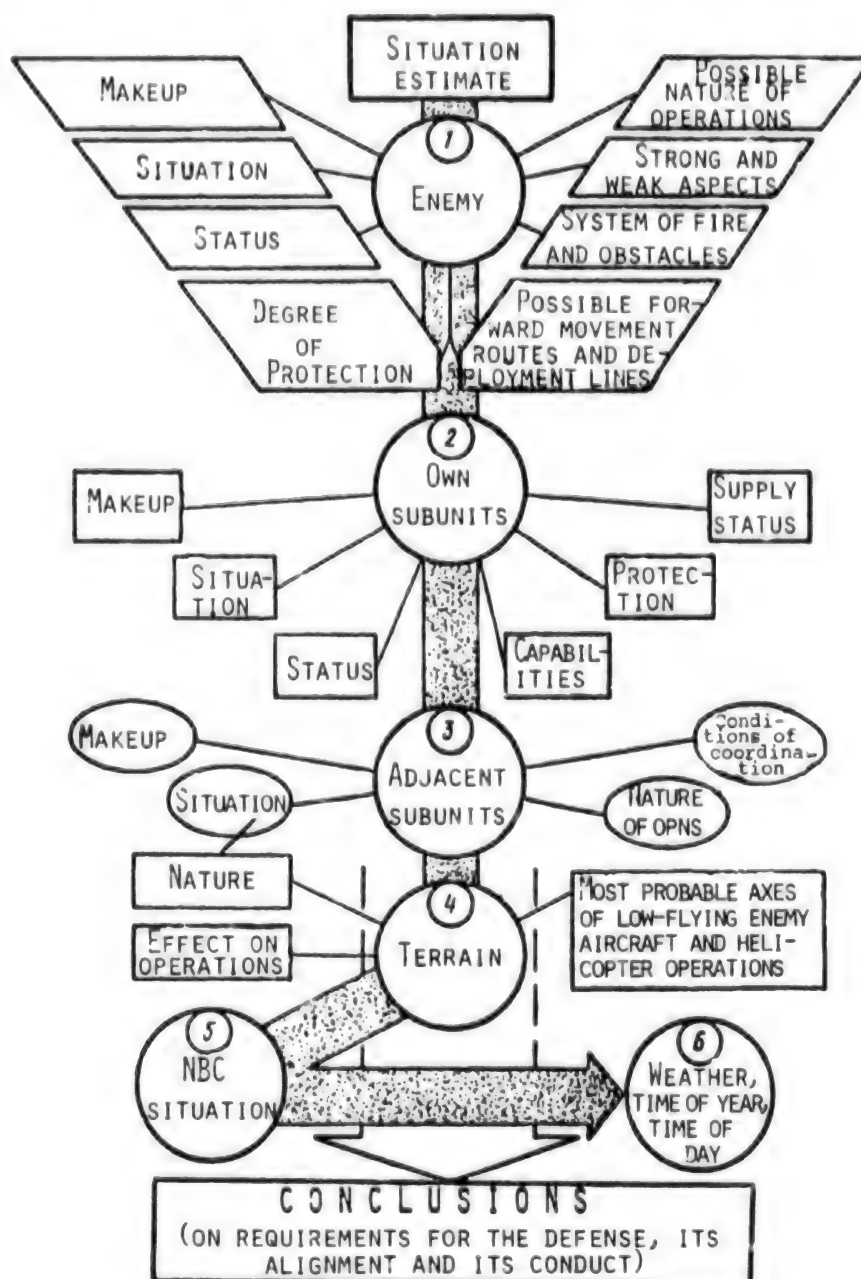


Fig.2.

Coordination is organized on the terrain to depth of visibility from a well camouflaged place, with thorough compliance with concealment. If it is impossible to travel onto the terrain (for example, with a shortage of time), such work is done from a map (or on a terrain model). In this case it is organized to the full depth of the combat mission. Two methods usually are used: the first is based on a commander's instructions and the second is based on reports of subordinate commanders, with successive rehearsal of subunit operations by missions, time and place and with a run-through of the main tactical episodes according to possible options of operations. The method of instructions is used chiefly when time is extremely limited. During battle, coordination is accomplished continuously and constantly updated, and it is organized anew when there are abrupt situation changes.

After assignment of missions and adjustment of coordination the commander of subunits [sic] begins deciding questions of combat support and C². Here missions for each kind of support, the makeup of assets to be used, and methods and time of accomplishing necessary measures before and during battle are updated.

Command-observation posts [COP's] are established in the battalion, company and platoon for C² of subunits in battle. The battalion (company) COP is disposed in that place from which it is best to observe the terrain, the enemy, and own and adjacent subunits, and also best to exercise continuous C². The motorized rifle platoon commander exercises C² from a COP usually situated in a communication trench (or at a squad position in the depth of the strongpoint) or from a BMP (BTR). A tank platoon commander directs battle from the tank. Where possible, they should see the terrain on approaches to the strongpoint, ahead of the FEBA and on the flanks; the entire platoon battle formation; positions of squads (firing positions of tanks) and adjacent strongpoints; and the company COP. C² is exercised in the platoon by radio, by voice commands, and by signalling devices. Personal example also can play an important role here.

Commanders of the grenade launcher platoon and anti-tank platoon control their platoons from the platoon COP, or from one of the squads when the platoons are operating by squads. Commanders of the motorized rifle companies (platoons) to which they are attached exercise C² of squads operating separately.

Communications is organized for reliable C² in the battalion (company) in accordance with the commander's decision and with instructions of the regimental (battalion) chief of staff. Responsibility for its status is assigned to the battalion chief of staff, and in the company and other subunits to the commanders. The battalion chief of communications organizes and is responsible for stable operation of communications. The commanders of the battalion and companies must have communications available under all situation conditions. Radio, wire, mobile and signalling means of communications are used in the battalion (company). Wire

and mobile communications are considered the main kinds in preparing the defense before the beginning of battle. Radio and signalling devices are used when wire lines fail in the course of battle.

Wire communications is established from the battalion COP communications center with COP's of first echelon companies by links and with other subunits by links or with several subunits over one line. Communications with the antitank platoon and the air defense platoon can be conducted over a line run to the motorized rifle company or via the commander of the company with which they are operating. In the mortar (artillery) battery a line is run from the COP to the firing position.

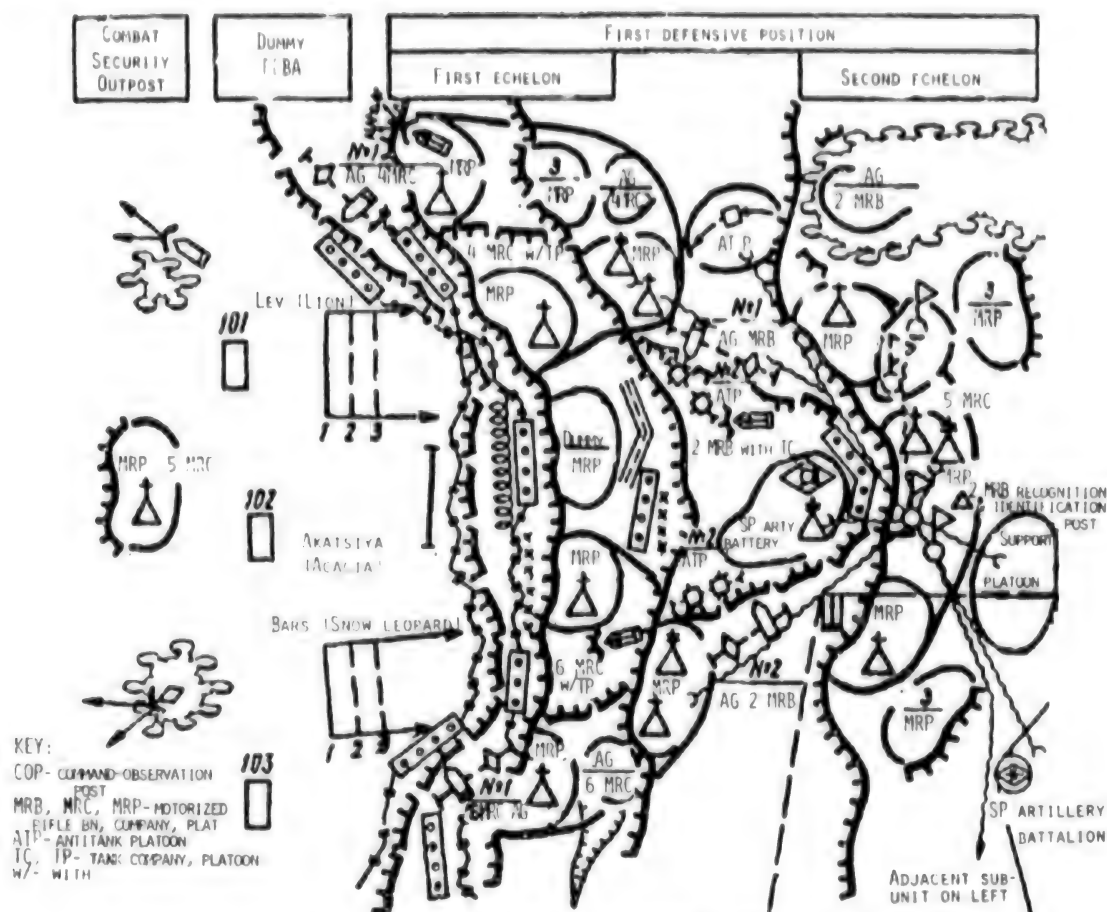
A line also is run from the battalion COP communications center to the supporting artillery battalion COP communications center by the artillery battalion's forces and assets. Lines with first echelon companies and the battalion rear are run through the alternate location of the battalion COP (Fig. 3).

Radio communications in the battalion is organized over radio nets; with the regimental commander it is over the regimental commander's HF and VHF [UKV] radio nets. The motorized rifle battalion as a rule communicates with subordinate subunits over two radio nets: a battalion commander's radio net which includes the radios of the battalion commander and chief of staff and of company, platoon and BMP commanders; and a battalion commander's radio net consisting of radios of the battalion commander, mortar battery (self-propelled artillery battery) commander, and commanders of the air defense subunit, antitank subunit and other combat subunits (Fig. 4).

Radio nets of company commanders function in the motorized rifle companies; they include radios of BMP's and BTR's and portable radios of platoon commanders. A VHF coordination radio net is set up for coordination with supporting combat helicopters on aviation band radios by equipment of the air controller point, which usually is disposed at the battalion COP. Wire communications may be set up with it in the presence of wire means.

Radio communications of the tank battalion commander with the regimental commander is established over two radio nets—HF and VHF. When the battalion commander is in the command tank, communications is maintained over the HF radio net. But when battalion tanks are outfitted with R-173 radios and R-173P receivers, company radio nets are set up in the battalion in addition to the battalion commander's radio net. This permits breaking the battalion radio net into smaller pieces and increasing flexibility, efficiency and stability of C² (Fig. 5).

The radio of the battalion technical observation post is connected into the regimental technical support radio net. The radios of damaged tanks, of repair and recovery teams and of the disabled vehicle collecting point are



CALCULATION OF WIRE MEANS OF COMMUNICATION (VARIANT)

COMMUNICATIONS LINK	MAP DISTANCE, M	CABLE EXPENDITURE, M	OPERATIONAL RESERVE, M	RESERVE, M
MRB COP-4TH MRC COP	1800	2000	300	—
MRB COP-6TH MRC COP	1400	1500	300	—
MRB COP-5TH MRC COP	200	500	—	—
MRB COP-2ND MRB SUPPORT PLATOON	1500	1700	300	—
MRB COP-ANTITANK PLATOON	800	1000	—	—
MRB COP-ADJACENT SUBUNIT ON LEFT	4000	5000	1000	—
TOTAL	—	11700	2500	—

Fig. 3

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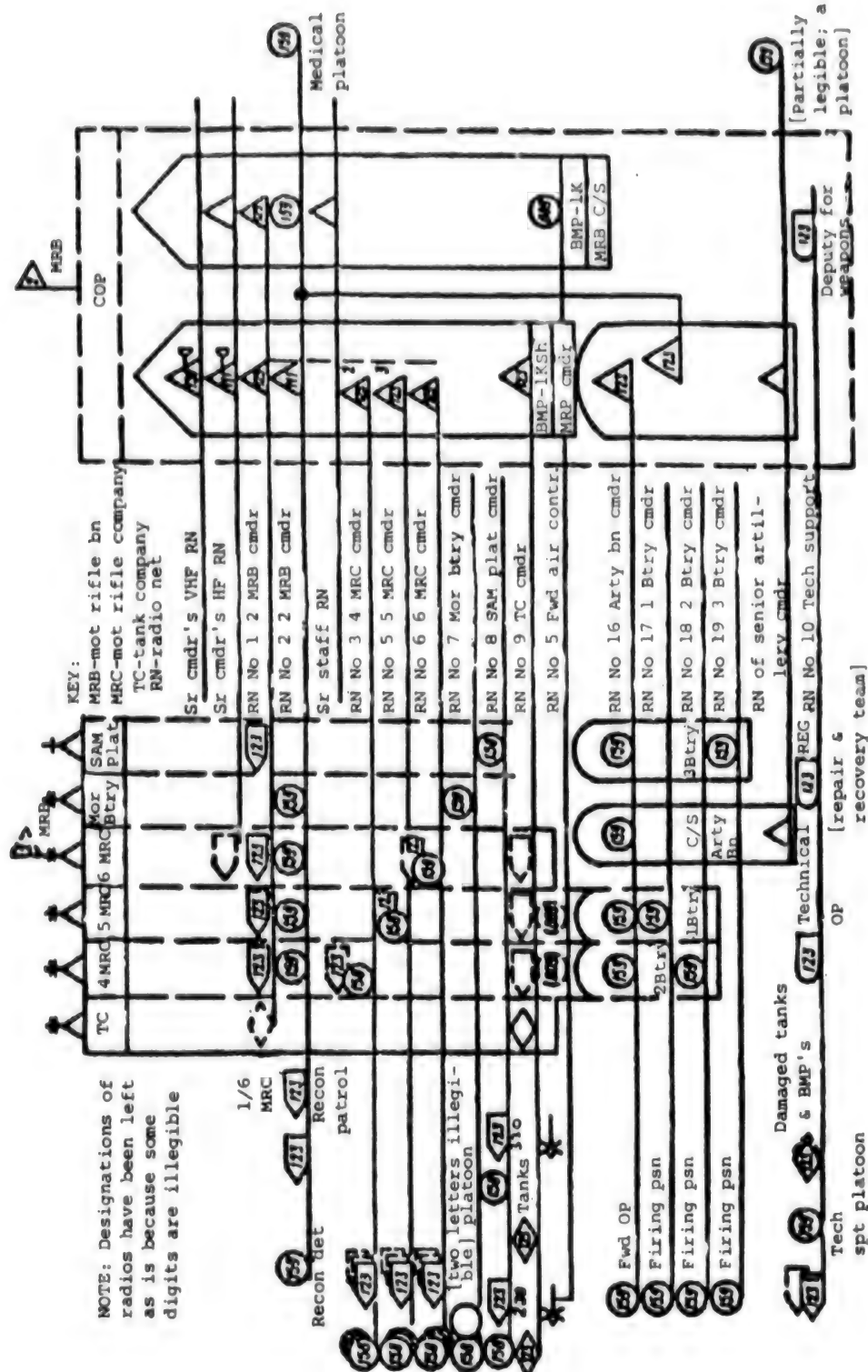


Fig. 4.

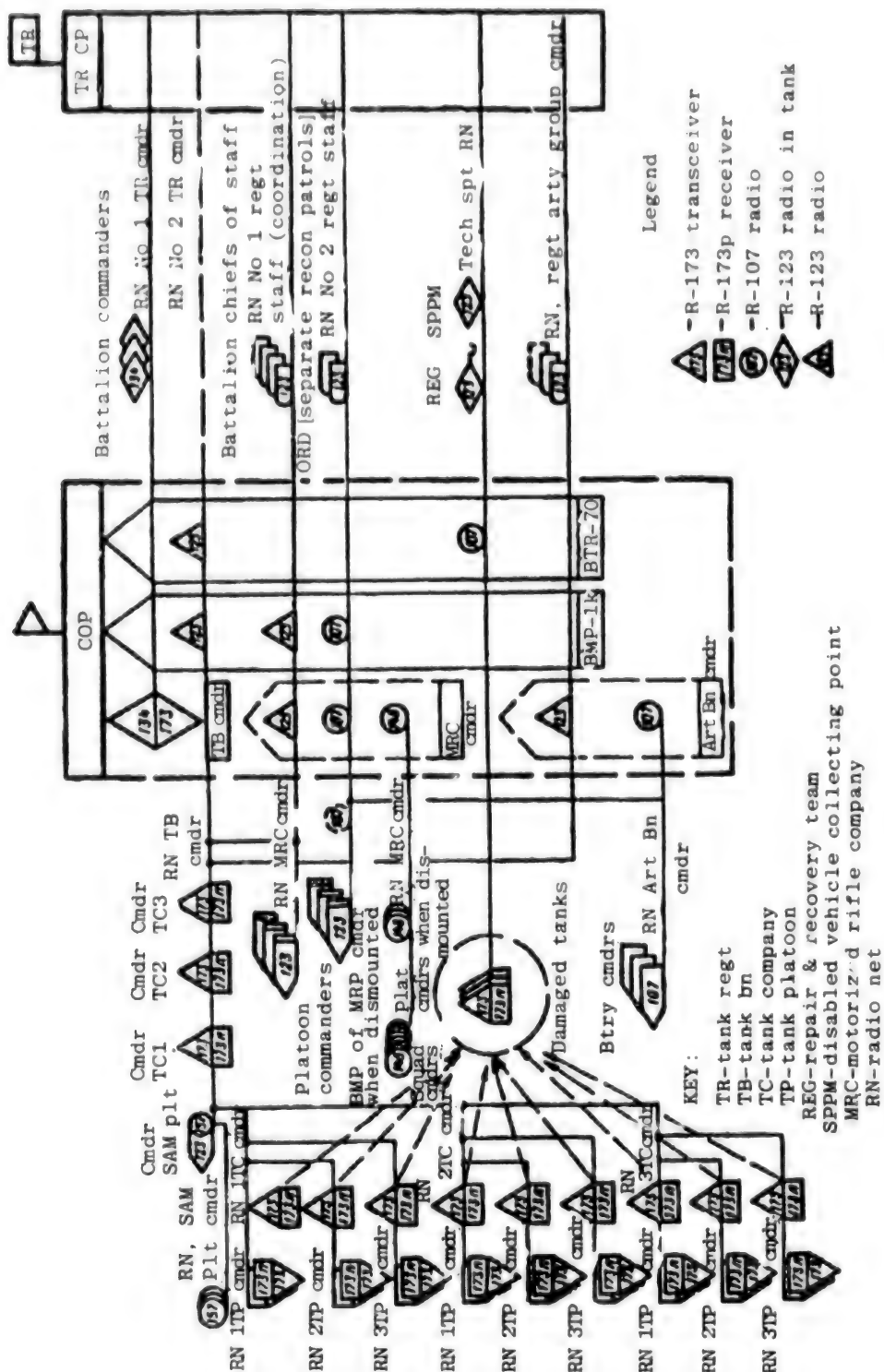


Fig. 5

connected into it as well. Communications for maintaining coordination between adjacent subunits is based on radio equipment of these subunits and also on wire and mobile means of the subunit on the right.

The commander's practical work in subunits holds an especially important place. The goal is to achieve their timely, complete preparation for battle. The commander checks preciseness of execution of orders and instructions and subordinates' knowledge of information on the enemy and of their own missions.

C² in battle presumes constant monitoring of subunits' operations, consideration of situation changes by a prompt updating of a previous decision and of missions to subunits, and coordination of operations in accordance with these changes. The commander influences the course of battle by efficient employment of second echelon (reserve) subunits and weapons at his disposal.

Fire control includes the following: reconnaissance, assessment and determination of the sequence of engagement of targets; selection of the kind of weapon and ammunition, the kind of fire and method of conducting it (method of fire); target designation, the issue of commands or assignment of fire missions, observation of the results of fire and its adjustment.

In all cases communications must be maintained reliably with one's own subunits, adjacent subunits, and the higher commander and staff. It is mandatory to constantly monitor subunits' execution of assigned missions and give them help. Commanders are obligated to comply strictly with established rules of conversations while operating radio equipment in the course of battle. In battle all commands are transmitted over radio in the clear. Subunit designations and commanders' job titles are encoded by use of callsigns, and points on the terrain are encoded by use of reference points and by prearranged (encoded) names.

The situation estimate is made in the course of battle based on the very same elements as in organizing for battle, but here new data are assessed first of all. The commander promptly reports to the senior commander about substantial situation changes, about receiving a new mission, about a new decision and about battle results. The report must be brief, specific, and in the form of a special or prearranged report.

(To be continued.)

Security of Military Facilities

944D0080E Moscow VOYENNY VESTNIK in Russian
No 4, Apr 94 (signed to press 26 Mar 94) pp 42-46

[Article by Colonel P. Alekseyev: "Security"]

[Text] *The discussion begun in the journal's pages on problems of security and defense of military posts and installations generated definite reader interest. The author directed our attention to what may appear to be a commonplace but very important aspect of day-to-day activity of commanders and staffs.*

This article generalizes the experience of units and subunits in organizing security during combat operations in Afghanistan. In our view, its use by subunits performing missions in "hot spots" will be of definite benefit.

Combat operations in the Republic of Afghanistan were characterized by the absence of a continuous front line. Essentially guerilla techniques and methods were used in the war. Important administrative and industrial installations, military unit garrisons and transport routes came under attack above all. So-called special-condition [rezhimnyy] zones were set up around them for providing security and public order and for preventing and stopping an attack by opposition forces. The main role in their security was set aside for our troops, who performed this mission by putting out permanent outposts [storozhevaya zastava] and posts.

The outposts and posts were prepared for a lengthy stay and performance of duty. Various ruins of former structures, each of which was prepared for perimeter defense, usually were used to build them. Many were built on a bare place using available materials. Broad initiative and inventiveness of the command element and all personnel were displayed here.

Responsibility for security and defense, for example, of airfields was assigned to garrison commanders. It was organized at three lines: on distant approaches by outposts which were part of the security system of special-condition areas; along the perimeter of the airfield, also by outposts; and installation internal security by guards.

One of the many special-condition areas on the territory of Afghanistan was protected by the 2nd Motorized Rifle Battalion [MRB] reinforced by a D-30 howitzer battery and two tank platoons. As Lieutenant Colonel A. Yunakov recalls, it represented a terrain area in which an air assault brigade headquarters, an air assault battalion, signal subunits, an EW company, a helicopter squadron and an artillery battery were stationed. Along with garrison security, the battalion was assigned two other missions—escorting columns along a route extending for 80 km at a rate of 2-3 columns per week, and fighting bandit forces in adjoining areas.

To perform these missions battalion forces and assets were distributed as follows (Diagram 1). Garrison security around a 12 km perimeter was accomplished by seven outposts consisting of one or two motorized rifle platoons, each with means of reinforcement. From one to two motorized rifle platoons with one or two 82-mm mortar crews were assigned to escort columns. A motorized rifle company, reconnaissance platoon, artillery battery and two mortar platoons usually were assigned to engage bandit forces.

After this special-condition area was established the garrison repeatedly came under fire by rocket projectiles from the Helmand River active combat zone. An operation was conducted (together with Afghan Army units) at the beginning of 1987 to drive bandit forces back from

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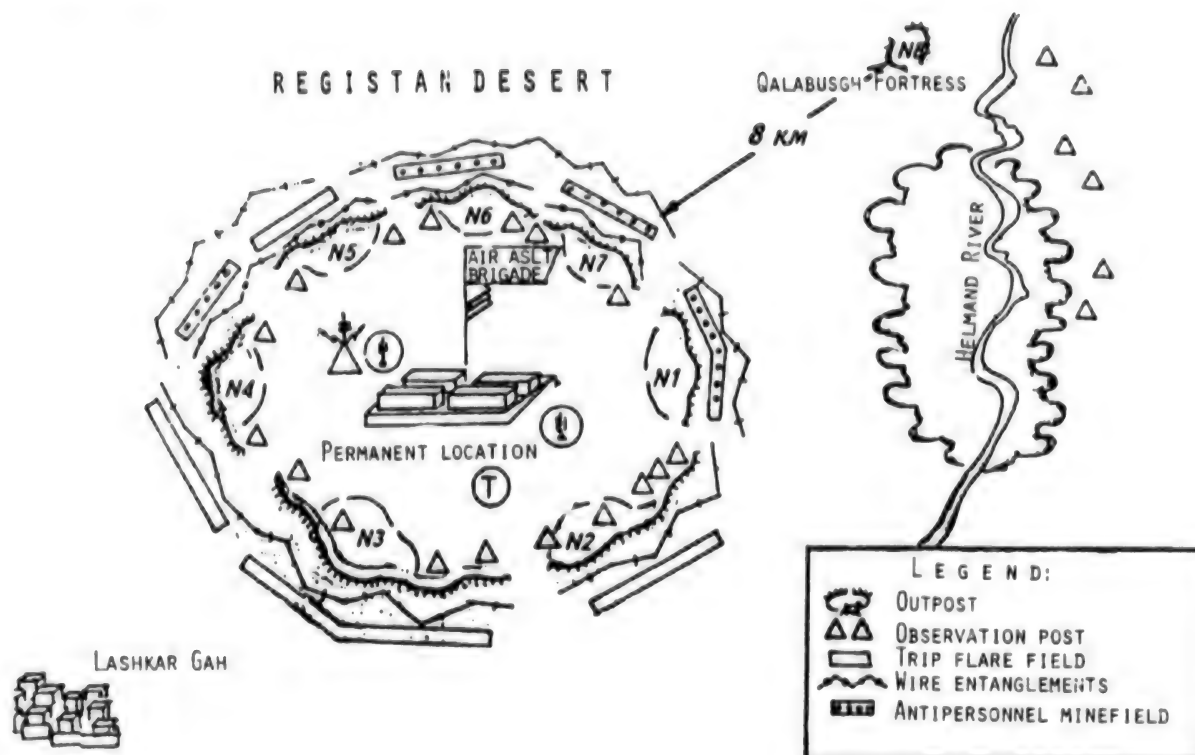


Diagram 1

the city of Lashkar Gah and set up outposts of a militia operations battalion in the active combat zone. After the conclusion of the operation the motorized rifle battalion put out one more outpost in the Qalabusgh Fortress. Its location permitted keeping a strip of the active combat zone ahead of the people's militia posts monitored. Close coordination was established between the outpost and Afghan subunits, particularly through a liaison officer. Fire support for the outpost was provided by a tank platoon located in the fortress and by the battalion's artillery, which permitted preventing several rebel attempts to destroy security posts of Afghan subunits.

Great attention was given to engineer preparation in order to achieve reliable protection of outpost personnel against rifle, machinegun and mortar fire. A position was prepared for each squad. All forward security posts were connected with the platoon position by a communication trench. In addition, sleeping spaces (where possible), an ammunition dump, office, messroom, potable water storage place, washroom and latrine were prepared at an outpost.

Performance of missions by outposts was ensured to a considerable extent by high organization of duties. Above all it should be noted that the night was the most difficult period. Security posts would be placed out from outposts during this time to improve outpost observation capabilities. As a rule, each of them consisted of

three persons: BTR machinegunner, driver and rifleman. They would go on alert duty at 1800 hours after communication of the operation order and password. Personnel at combat posts would be relieved every four hours by the platoon commander or his deputy. Performance of duty would be checked every two hours. At night precautionary small arms fire against the terrain was permitted only with single rounds. When bursts were fired the outpost would be raised "To arms" and would act according to the allotment of battle tasks. Artillery also could fire against designated targets. Artillerymen were guided here by a previously drawn up schedule. Fire would commence without warning against all targets which appeared in the zone of responsibility at night. Security posts would be removed at the break of dawn. All movements of people, columns and caravans in the Registan Desert to a distance of up to 4 km would be cut off by fire. Personnel were categorically prohibited from moving out of the outpost position.

Outposts would be relieved every six months in hours of daylight according to a document approved by the battalion commander. Subunits relieved of duty were to perform another mission—escort columns with freight. Combat training would be organized in support of this mission, during which there was a rehearsal of such matters as clearing mines from roads and bridges, repelling an attack on the column, and recovering vehicles

from under fire. That approach to organizing security at the halt on the whole supported the normal vital activity of military garrisons.

Experience indicates that heads of the opposition gave priority attention to disrupting the movement of transportation assets on main highways. Their security was assigned to motorized rifle subunits. A battalion would be assigned a zone of responsibility of from 40 to 150 km and a motorized rifle company from 2 to 10 km. For example, a zone of responsibility in the Pul-e- Charkhi/Jalalabad road extending for 102 km was assigned to 3rd MRB reinforced by a tank company and two artillery batteries and having in its makeup, counting means of reinforcement, 11 tanks, 42 BMP's, 12 self-propelled artillery mounts, 27 82-mm mortars, 9 antiaircraft twin mounts and 23 automatic grenade launchers. By decision of battalion commander Lieutenant Colonel M. Tubeyev, the battalion zone of responsibility was broken into three sectors (Diagram 2). The sector of responsibility for 7th Motorized Rifle Company [MRC] equalled 323 km, and for 80th MRC 40 km. The extent of zones and sectors of responsibility of battalions and companies in the final account was determined based on the importance of protected installations, nature of terrain, availability of forces and assets, and operations of the opposition. A differentiated approach to distributing means of reinforcement also can be observed, manifested in the fact that the more important the sector, the more forces and assets assigned for its security.

Motorized rifle subunits assigned to security were given missions of [detecting] and destroying rebels in sectors of responsibility, supporting the unimpeded passage of columns along main routes, preventing the mining of roads, bridges and tunnels, and a number of other specific missions in addition.

Thus, in February 1986, in addition to providing column escort in the Pul-e- Charkhi/Jalalabad road sector, 3rd MRB provided security for the hydroelectric power station in the vicinity of Naghlu.

The basis of security consisted of outposts made up of a platoon reinforced by one or two AGS-17 grenade launchers, one or two Utes or DShK [Degtyarev-Shpagin] heavy-caliber machineguns, one or two 82-mm mortars and a tank. Outpost detachments (a company or battalion) would be formed from outposts and reinforced by artillery, tanks and engineer subunits for installing and maintaining minefields covering the outpost positions and for clearing mines from roads and the terrain.

A daily detail (a duty person and two or three orderlies), one observer at each squad (tank) position and a two-man patrol were assigned to perform duty at outposts. Listening posts or forward security posts would be put out on concealed approaches for prompt detection of the enemy and for warning about him. One or two forward posts of 4-6 persons usually would be organized at each outpost. As a rule, they were located 500-800 m from the

outpost. That distance ensured not only wire, but also visual communications, and if necessary also effective support of security posts by outpost fire.

Positions were prepared for a perimeter defense to repel an enemy attack from any direction. In this connection platoons were assigned zones of fire, secondary sectors of fire and fire concentration sectors, and weapons were assigned alternate firing positions and sectors of fire. Much attention was given to artillery fire. In this connection artillery subunits usually would occupy outposts and, with consideration of fire capability and reach of fire, would be disposed evenly throughout the sector for fire support of other outposts. Artillery fire was planned in the vicinity of each of them on likely avenues of operations by rebel force elements. Targets were registered and their numbering and coordinates were present at the outpost, with the artillery team and in the battalion headquarters.

Fire would be conducted against planned targets with consideration of adjustment at the outpost commander's request and sometimes also by command of the battalion commander if for some reason the outpost did not have direct communications with artillery subunits. Experience indicates that it took no more than 2-4 minutes to commence fire against a detected group of rebels.

Outposts would be prepared in the engineer sense and improved with consideration of terrain and duration of duty. Standard trenches, dugouts, and ammunition, food and water shelters would be dug (or made out of stone). Wire entanglements were set up around the position, usually in two rows of stakes with antipersonnel mines laid between them. In addition, trip flares and reconnaissance-signalling apparatus would be installed on distant and concealed approaches to the protected installation. The passage and entrance to the outpost would be closed and mined for the night. Boundaries of security posts and outposts would be marked by signs in Afghan, Russian and English with an indication of the procedure of conduct.

Ammunition reserves in the amount of five units of fire and reserves of food, water, and fuel for ten days were established at each outpost. In addition, there were night vision devices, Blik binoculars, night sights, illumination flares and illumination flare cartridges for observation at night.

The following documentation was drawn up at an outpost: outpost combat mission and procedure for its execution; working map with situation; strongpoint diagram; excerpt from battalion commander's operation order; combat outpost commander's operation order; schedule for performance of duty by observers, patrols and listening posts and for the duty of weapons; signal table; observation log, combat operations log, and record of subversive activities.

A security organization plan would be developed in a battalion assigned to security. It would indicate the number and makeup of outposts and their disposition;

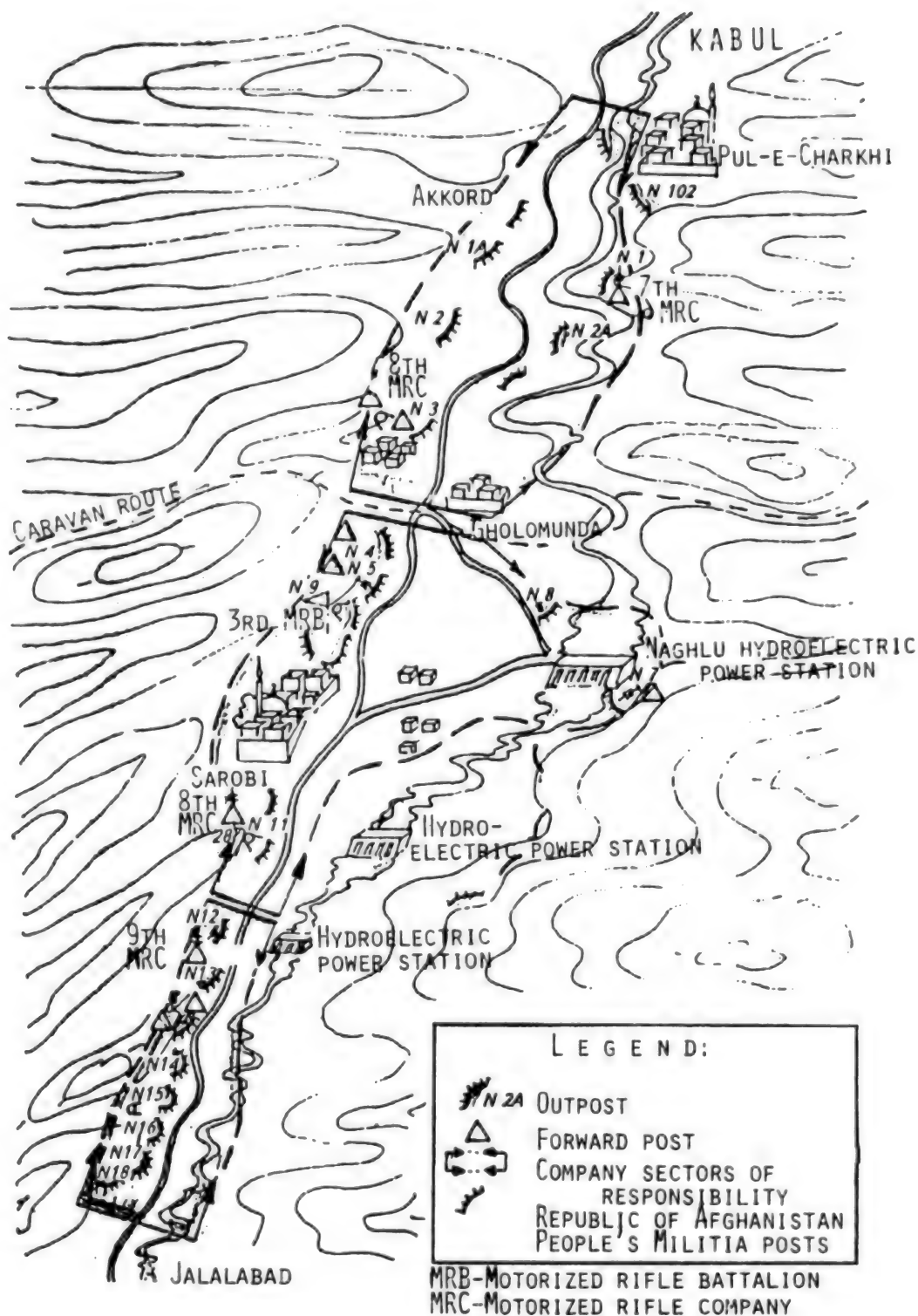


Diagram 2

the amount of equipment, weapons and ammunition at outposts; outpost security zones; combat mission for protection of installations; and the procedure for coordination among outposts, procedure for fire engagement of the enemy, and procedure for organization of communications among outposts, permanent locations, passing columns, air traffic control posts [dispatcher'skiy post] and supporting weapons. In addition, the battalion would have a subunit relief schedule and the battalion commander's operation order for organizing security at the halt. In addition to organic equipment, subunits also had additional means of communication for command and control (radios, telephone sets and cable).

Radio was the basic means of communications. An outpost would have one or two VHF [UKV] radios operating on the same frequency. This same frequency was set in all armored vehicles in the battalion and in attached subunits and would be communicated to military columns proceeding along a sector of the route for stable coordination. Constant watch on a radio net was mandatory for all subunits (outposts) for the period of passage of columns. At other times there was constant watch on radio equipment of battalion and company commanders using the set of radios of command and staff vehicles attached to the battalion and portable radios in companies and also at outposts of artillery subunits. The other outposts would come up in communications with the command-observation posts of their own companies according to a prescribed schedule, as a rule hourly or as necessary. All this permitted maintaining stable coordination and a constant, high level of readiness of subunits for operations.

A reconnaissance platoon would be located near the battalion commander's COP at his immediate disposal. It was assigned the mission of realization of intelligence for stopping the activity of and destroying small groups of rebels in the battalion zone of responsibility. Its actions basically reduced to arranging ambushes on possible rebel routes of movement to a road. Operations of subunits in ambushes were conducted under a plan coordinated with the regimental staff. As a rule, an ambush would be conducted during one night, but there were cases where the situation forced subunits to be in an ambush for up to three days without changing the area. Success was achieved only in the presence of complete, reliable information on rebel actions and also with use of the most daring techniques and deception.

Thus, combat practice indicates that support to the vital activity of entire areas and garrisons on the territory of Afghanistan was achieved above all by reliable security—by putting out outposts. Their proper organization produced positive results in fighting the rebels and helped to achieve security in escorting columns and to stop subversive actions by rebels at the locations of military garrisons, airfields, electric power stations, mountain passes, tunnels and other important installations. War experience showed the viability of guidelines in questions of organizing security when disposed at the

halt. Great success was achieved by commanders having firm theoretical knowledge and capable of nonstereotyped thinking.

Modular Electric Obstacle System

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No 4, Apr 94 (signed to press 26 Mar 94) pp 49-52

[Article by Colonel (Retired) V. Andreykov, Major N. Ginz and Senior Lieutenant O. Melnik under rubric "For Specialists of Engineer Troops"]

[Text] Electrified obstacles hold a special place among artificial antipersonnel obstacles. This is determined by the fact that they possess a number of valuable specific features and can be used successfully under various combat situation conditions. Electrified obstacles above all exert a strong moral and psychological effect on the enemy and permit achieving high effectiveness of engagement. They create a continuous frontage of a covered terrain sector and silent operations and they provide for multiplicity of use and promptness of control in various operating modes. The insignificant strip of terrain taken up for the obstacles and its safety after they are removed is another advantage of electrified obstacles.

An analysis of methods of their use in the battle and operation showed that they are a tactical means whose use is most advisable as mobile modular sets. It is recommended using such electrified obstacle sets to cover lines, positions and areas occupied by troops and for security and defense of important military and state installations in the course of combat operations. It is advisable to set up the electrified obstacles in combination with minefields and other kinds of artificial obstacles.

At the present time a mobile set of modular electrified obstacles (EZM) is in the inventory. A fixed set, the EZM-S, was developed on its basis in 1992 for security of fixed installations. The presence of a repelling mode of operation along with an incapacitating mode will permit using these EZM sets not only under combat conditions, but also in peacetime for security of military and state installations. The urgency of their use in peacetime is confirmed by numerous instances of an attack on military installations for seizing combat equipment, ammunition and military property.

The EZM set (Fig. 1 [figure not reproduced]) includes the following: primary electrical power source—12ST-70 storage battery, main (2) and reserve (4); transformer (3) for transforming the 24 volts of the storage battery's low voltage into high-voltage pulses; recharger (5) for recharging the storage battery; cables on a drum (6) for supplying power to obstacles; containers with supporting and suspension insulators (7, 8), by which the combination electrified grid (1) is set up on the terrain; and container with spare parts, tools and accessories (9). The EZM set permits setting up an electrified obstacle extending up to 500 m.

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In contrast to the mobile set, the EZM-S fixed set (Fig. 2 [figure not reproduced]) includes a power supply unit (3). It supplies power both from a 380 volt, 50 Hz, three-phase power network as well as with operation in a buffer with a 12ST-70 storage battery (2). The set also has two

electrified grids (6), three reels with a cable system (5), and ground rods (4). It is designed for installation of obstacles extending up to 1 km.

Basic specifications and performance characteristics of the EZM and EZM-S sets are shown in the table.

Basic Specifications and Performance Characteristics of Electrified Obstacle Sets

Characteristic	EZM Set	EZM-S Set
Length of obstacle, m	500	1,000
Operating modes	Incapacitating, repelling, waiting	Incapacitating, repelling, waiting
Transformer output voltage (peak), volts		
Incapacitating mode:		
1st stage	1,500	1,500
2nd stage	2,500	2,500
Repelling mode (1st stage)	1,500	1,500
Repetition frequency, pulses per second:		
Incapacitating mode	20	20
Repelling mode	1	1
Pulse duration, sec	0.005	0.005
Control methods	Local, remote	Local, remote
Time of continuous operation from one storage battery, hrs		
Incapacitating mode	Up to 24	Up to 24
Repelling mode	Up to 100	Up to 90
Transformer input voltage, volts:		
Powered from supply line	-	380±19
Powered from storage battery	24	24
Operating conditions:		
Ambient temperature, °C	From -50° to +50°	From +40° to -10°
Relative air humidity, %	Up to 98 at +25°C	Up to 98 at +25°C
Number of set-ups (tear-downs)	150	-
Crew	2	2
Set-up (tear-down) time of set by four-person team, hrs	1.5	-
Weight of set, kg	500	856 (less packaging)
Life, hrs	10,000	10,000

The EZM and EZM-S sets are standardized to the maximum. Series manufactured 24-volt storage batteries are used as their source of electrical power. The 24 volts is transformed into high voltage (1,500 and 25,000 [sic] volts) using a single transformer of the storage battery's low voltage. It is supplied to an electrified grid in the form of single-polarity voltage pulses with a duration of 5 milliseconds and a repetition frequency of 20 pulses per second (incapacitating mode) or 1 pulse per second (repelling mode).

The obstacle is made from a combination electrified grid (there is one 500 m grid in the EZM set and two 1,000 m grids in the EZM-S set). In the EZM-S set the linear part of the obstacle can be made both from the organic

combination electrified grid as well as from metal grid No 100 with five 1.8 mm metal lines fastened on vertical supports to create an "artificial ground" ahead of the obstacle and from an additional obstacle to increase the effectiveness of engaging the enemy (a violator).

The electrified grid in the sets can be connected to the transformer in single-polarity, double-polarity and incomplete combination circuits. The most effective for incapacitation is the incomplete combination circuit, which permits preserving incapacitating voltage between even and odd lines of the electrified grid and also between even lines and the ground.

It is recommended using a double-polarity circuit under conditions of low soil conductivity (in winter, in hard

rock and firm rock, in sandy soil). In this case an incapacitating voltage is created between even and odd lines of the electrified grid. A single-polarity circuit can be used in summer in good conducting soils. An intruder is incapacitated when he touches any line of the electrified grid on which there is voltage with respect to ground. The PPG-3000 high-voltage cable with PKShR [not further expanded] connectors enable joining cable segments together and also with the transformer and electrified grid quickly and conveniently.

EZM and EZM-S sets provide obstacle reliability in the incapacitating, repelling and waiting modes of operation.

The incapacitating mode is used when sets are used to cover troop positions on the FEBA, for security of military installations under nighttime conditions, and also in a special period. The mean probability of incapacitation is 0.5-0.6. The repelling mode, in which a strong but nonlethal electric shock is given the enemy (violin), should be used when covering troop positions in the depth of the defense, when securing military installations in the daytime, and also when sets are used near built-up areas and roads where the civilian population may be present. The probability of nonincapacitation in the repelling mode is at least 0.999.

A so-called waiting mode is provided in the sets to save electrical energy of the primary source (storage battery). Its essence is that the set is in full combat readiness, but voltage has not been supplied to the obstacle and electrical energy is not being expended on it. The obstacle is switched to an incapacitating or repelling mode (according to choice) from a detection sensor set up ahead of the electrified grid and connected to the set's transformer. For faultless operation of the sets in a particular mode there is a special interlock on the transformer, the key to which is kept by the commander (senior member of team) or commander of the guard of the protected installation. Controls and electrical measuring instruments are on the face panel of the transformer; they are used to switch the transformer on or off, select operating modes and adjust the voltage.

The transformer control circuit also provides for its shut-down (protection) when storage battery voltage drops below 21 volts. This guarantees lengthy working capacity of storage batteries under conditions where sets are operated in the troops. There is the capability of disconnecting this protection under special conditions caused by the combat situation, which permits the set to preserve close to an emergency mode for a certain time and remain in a working condition.

The remote panel enables controlling the transformer operation, switching the transformer on or off and

switching the operating modes remotely (up to 100 m). In addition, the remote panel indicates the presence of voltage at the transformer output, showing its serviceable operation and the appearance of an emergency mode in the linear part of electrified obstacles and in the electric power cables.

Component parts of the EZM and EZM-S sets, which represent single modular designs in the form of containers and reels with the combination grid and with a drum with cable, are adapted for two persons to carry during set-up (tear-down). It should be noted that setting up the electrified grid on the terrain requires a team of four (two deploy the grid from the reel and two secure it on the terrain using the supporting insulators).

When the EZM and EZM-S sets are used to cover troop positions, the electrified grid is set up at a distance of up to 100 m from the transformer, as a rule in a horizontal position on supporting insulators. The transformer is set up in a recess (in a trench). The portable panel usually is with the senior member of the team. When sets are used to secure military installations, the electrified grid usually is set up in a vertical or inclined (75-80° angle) position. It is fastened by the upper side line using suspension insulators to reinforced concrete or wooden supports set 8-10 m from each other, and by the lower side cable to the ground using the supporting insulators. The transformer is installed in the guardroom and the remote panel is with the commander of the guard (assistant commander of the guard for technical security equipment).

Before the set is turned on for operation, its serviceability, including storage battery voltage, should be checked. If it is 21 volts or lower it must be placed on recharge and the reserve storage battery or power supply line (for the EZM-S set) used for operation. To avoid malfunctioning of the electrical power source under ordinary operating conditions it is not recommended that the protection against a storage battery voltage drop be disconnected.

For more effective operation of the electrified obstacle sets and to save electrical energy it is recommended that the first voltage stage (1,500 volts) be used for summer operating conditions and the second (2,500 volts) for winter. To increase the sets' incapacitating capability it is permissible to turn on the second voltage stage under summer conditions ("summer-dry"), but here one must see to it that there is no current overload. The EZM and EZM-S sets support rapid, reliable installation of electrified obstacles, which in combination with explosives and demolitions enable performing missions of covering troop positions and providing security of military installations using effective antipersonnel obstacles.

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